Colorful flower has only one home—Site 300

By STEVE WAMPLER

Bright splotches of orange dot a steep, grassy embankment amidst the hills of Site 300, between Tracy and Livermore.

Those colorful flowers, popularly called the large-flowered fiddleneck and scientifically dubbed the Amsinckia grandiflora, are found no where else in the world.

They only grow in a small, about one-sixth of an acre area at the Lab's 7,000-acre chemical high explosives test area along Corral Hollow Road.

During the course of a year, the Lab's claim to "world flower fame" only receives a few visitors, such as biologists, botanists or fish and wildlife officials who specifically come to see the large-flowered fiddleneck.

Two such visitors, from The Nature Conservancy, a non-profit organization which works to protect rare plant species, came to Site 300 last week.

"This is one of the very rarest plants in California and the Bay Area and since it was nearby, we were very interested to see it," said Barbara Leitner.

Leitner and fellow TNC botanist Robin Cox, both from the group's San Francisco office, toured the plant's area with LLNL's James Lane, a senior business services administrator assigned to Site 300.

Braving the threat of possible rattlesnakes crawling in the grass, the two botanists scouted out the plant's environment and measured its area.

"The thing that's curious is they're (the large-flowered fiddleneck) on this bank; why aren't they somewhere else?," Leitner wondered aloud.

While a 1980 survey found there were 28 large-flowered fiddleneck plants at the one small area inside Site 300, Cox and Leitner estimated last week there are now from 50 to 100 plants.

"It seems to have grown prolifically," Lane said, after noting the plant did not bloom at all in 1983 for the first time in recent years.

Last year's heavy winter and spring rains caused the natural grasses to grow up and to choke out the large-flowered fiddleneck, Lane explained.

Leitner suggested the reason the flower only grows in the small area at Site 300 may be because some ecological requirement for the plant is missing in other areas.

"Plants are remarkably good at dispersing themselves and if they don't, you have to ask yourself why," she noted.

One special ecological feature of the plant site, Leitner noted, is that its slope faces north, thus allowing less exposure to the sun and holding moisture a little longer.

In addition, another consideration is the lack of human or animal disturbance of the plant, which can only be reached by climbing a steep embankment or going through a locked chain-link fence, Leitner said.

The plant's survival at Site 300 because of its isolation was also mentioned in a 1981 report prepared for LLNL on the large-flowered fiddleneck and the San Joaquin kit fox by Goleta-based EG&G.

"Amsinckia grandiflora probably exists only because of the protection within a security area...," the report's authors said.

They noted livestock grazing no longer exists on the site and that the area is still subjected to controlled burning while fires on agriculturally-developed lands are strongly suppressed.

No activities are allowed in the area of the large-flowered fiddleneck by LLNL, Lane said, adding, "We don't want to be the ones to eradicate the flower."

For her part, Leitner indicated she believes LLNL has taken reasonable steps to protect the Amsinckia grandiflora.

"Botanists have exhaustively searched for this plant and have failed to find it in any other place," Leitner said. "We believe this is the only place in the world where it is found."

Known to bloom in April and May, the large-flowered fiddleneck at Site 300 is located near the Lab's Drop Tower, Bldg. 858, which is used to check the safety of transportation containers.

The plant is an annual, flowering in the spring and then producing seeds before dying in the summer. The seeds germinate after the following winter's rains.

Thought to have been extinct in 1930, the large-flowered fiddleneck was found at Site 300 in 1938.

The state's Department of Fish and Game estimates there are about 115 kinds of rare plants which are found at one site only in California—and no where else in the world, Cox said.

Robin Cox (left) and Barbara Leitner of The Nature Conservancy look over a large-flowered fiddleneck plant at LLNL's Site 300, the only place in the world where the plant grows.

Chess games to Levy

LLNL's Harry Nelson isn't surprised at the outcome of his "man vs. machine" chess match—just disappointed.

The Cray-Blitz computer chess program of Nelson and two other Americans lost three straight games in London Saturday, Sunday and Tuesday to British international master David Levy.

Levy and the Cray-Blitz program are scheduled to square off once more today.

The chess program of Nelson and two University of Southern Mississippi professors — Robert Hyatt and and Albert Gower — had computer hardware snags in the second and third games and didn't make its moves in the required time, Nelson said Tuesday in a phone call from Minneapolis, Minn.

Nelson is there at the Cray Co.'s headquarters using the firm's XMP/22 computer and is in communication with Gower and Hyatt in London.

"I'm very disappointed that we didn't get to play (more), but I'm not particularly surprised by the outcome," Nelson noted.